XBR-000147-AO

8.5Gbps SFP+ Short Wave Length Transceiver

Features

- Operating data rate up to 8.5Gbps
- 850nm VCSEL Laser Transmitter
- Distance up to 50m with 50/125 µm MMF
- Singer 3.3V Power supply and TTL Logic interface
- Duplex LC Connector Interface
- Hot Pluggable
- Operating Temperature: 0°C ~+ 70°C
- Compliant with MSA SFP Specification
- Digital diagnostic monitor interface compatible

Product Description

Add-on Computers XBR-000147-AO is a multi-mode transceiver is a small form factor pluggable module for bi-directional serial optical data communications such as Fiber Channel links up to 8.5 Gbps data rate over multi-mode fiber. This module is compliant with FC-PI-4 and compatible with SFF-8432 industry standards.

The XBR-000147-AO is designed to be compliant with the SFF-8472 SFP Multi-source Agreement (MSA).

Regulatory Compliance

Feature	Standard	Performance
Electrostatic Discharge (ESD) to the Electrical Pins	MIL-STD-883E Method 3015.7	Class 1(>500 V) Isolation with the case
Electromagnetic Interference (EMI)	FCC Part 15 Class B	Compatible with standards
Laser Eye Safety	FDA 21CFR 1040.10 and 1040.11 EN60950, EN (IEC) 60825-1,2	Compatible with Class I laser product. Compatible with TµV standards
Component Recognition	UL and CUL	UL file E317337
Green Products	RoHS	RoHS6

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	TST	-40	+85	°C
Supply Voltage	VCC	-0.5	3.6	V

Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating Case Temperature	TOP	0		+70	°C
Power Supply Voltage	VCC	3.15	3.3	3.45	V
Power Supply Current	ICC			300	mA
Surge Current	ISurge			+30	mA
Baud Rate			1.25		GBaud

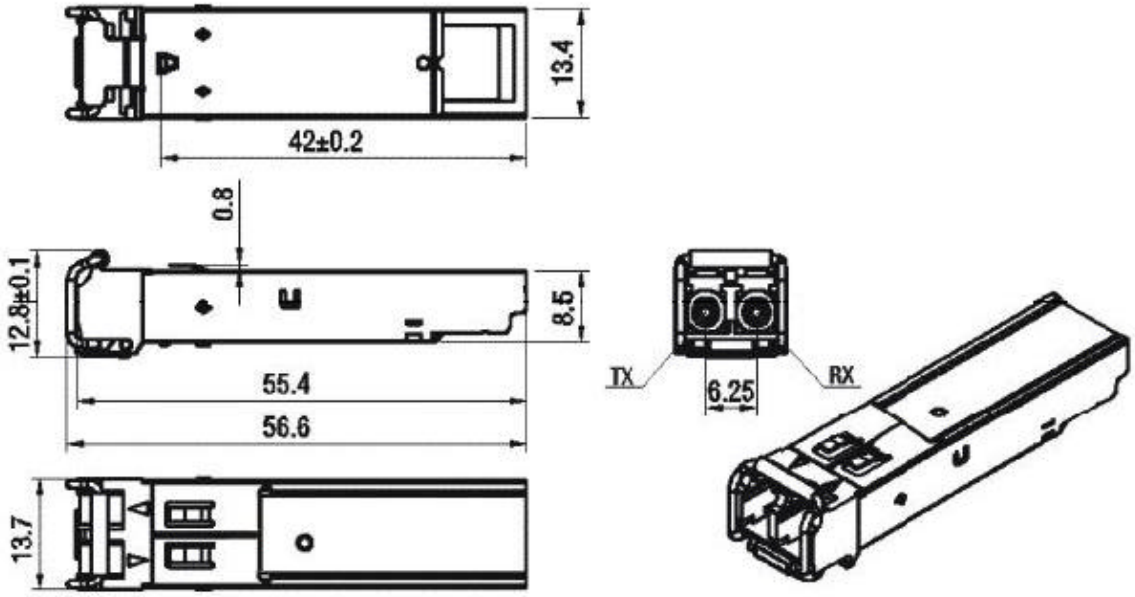
Parameter	Symbol	Min	Typ.	Max	Unit
Input differential impedance	Rin		100		O
Single ended data input swing	Vin,pp	90		800	mV
Transmit Disable Voltage	VD	2		Vcc	V
Transmit Enable Voltage	VEN	Vee		Vee+ 0.8	V
Single ended data output swing	Vout,pp	170		400	mV
Data Output Rise/Fall Time @ 2.125, 4.25 Gb/s	tr/ tf			120	ps
Data Output Rise/Fall Time @ 8.5 Gb/s	tr/ tf			60	ps
LOS Fault	VLOS fault	2		VccH OST	V
LOS Normal	VLOS norm	Vee		Vee+0 .8	V
Power Supply Rejection	PSR	100			mVpp
Deterministic Jitter Contribution @ 2.125 Gb/s	RX ? DJ			47.1	ps
Total Jitter Contribution @ 2.125 Gb/s	RX ? TJ			123.5	ps
Deterministic Jitter Contribution @ 4.25 Gb/s	RX ? DJ			23.5	ps
Total Jitter Contribution @ 4.25 Gb/s	RX ? TJ			61.8	ps
Deterministic Jitter @ 8.5 Gb/s	RX DJ			49.4	ps
Pulse Width Shrinkage @ 8.5 Gb/s	RX DDPWS			42.4	ps
Total Jitter @ 8.5 Gb/s	RX TJ			83.5	ps

Receiver					
Receiver OMA Sensitivity = 2.12 Gb/s	RxSENS			49	µW
Receiver OMA Sensitivity = 4.25 Gb/s	RxSENS			61	µW
Receiver OMA Sensitivity = 8.5 Gb/s	RxSENS			76	µW
Average Receiver Power	RxMAX	0			dBm
Optical Center Wavelength	?C	770		860	nm
Optical Return Loss		12			dB
LOS De-Assert	LOSD			-18	dBm
LOS Assert	LOSA	-30			dBm
LOS Hysteresis		0.5			dB

Optical and Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Output Opt. Pwr: 50 or 62.5 MMF	POUT	-9		-2	dBm
Optical Wavelength	?	830		860	nm
Spectral Width	s			0.65	nm
Optical Modulation Amplitude @ 2.125 Gb/s	OMA	196			µW
Optical Modulation Amplitude @ 4.25 Gb/s	OMA	247			µW
Optical Modulation Amplitude @ 8.5 Gb/s	OMA	302			µW
Optical Rise/Fall Time @ 2.125, 4.25 Gb/s	tr/ tf			90	ps
Transmitter Waveform and Dispersion Penalty @ 8.5 Gb/s	TWDP			4.2	dB
Relative Intensity Noise	RIN			-128	dB/Hz
Deterministic Jitter Contribution @ 2.125 Gb/s	TX ? DJ			56.5	ps
Total Jitter Contribution @ 2.125 Gb/s	TX ? TJ			119.6	ps
Deterministic Jitter Contribution @ 4.25 Gb/s	TX ? DJ			28.2	ps
Total Jitter Contribution @ 4.25 Gb/s	TX ? TJ			59.8	ps
Receiver OMA Sensitivity = 2.125 Gb/s	RxSENS			49	µW
Receiver OMA Sensitivity = 4.25 Gb/s	RxSENS			61	µW
Receiver OMA Sensitivity = 8.5 Gb/s	RxSENS			76	µW
Average Receiver Power	RxMAX	0			dBm
Optical Center Wavelength	?C	770		860	nm
Optical Return Loss		12			dB
LOS De-Assert	LOSD			-18	dBm
LOS Assert	LOSA	-30			dBm
LOS Hysteresis		0.5			dB

Mechanical Specifications



Contact Information

Add-On Computer, Inc. is a leading supplier of Memory Upgrade, Network Transceivers and Network connectivity products to Channel Partners, Resellers and OEMs, with more than seventeen years of direct industry experience. Add-On Computer (ACP) has been the exclusive supplier to Ingram Micro's "Memory Upgrades" program for the past nine years.

Add-On Computer maximizes profitable opportunities for our partners. Our ability to source product worldwide, ensures that our pricing will always be competitive. Offering turnkey solutions, Add-On Computer has forged a reputation as a solutions provider, delivering high quality, cost effective product in a timely and reliable manner.

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